

Notice of Allowability

Application No.

10/038,326

Examiner

Anne Marie M. Boehler

Applicant(s)

SMITH, ROGER

Art Unit

3611

klw

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an amendment filed 10/18/04.
2. ☒ The allowed claim(s) is/are 8-17, 21-23, 26, 27.
3. ☒ The drawings filed on 02 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Donald Wood on October 28, 2004.

3. The application has been amended as follows:

The full text of the withdrawn claims 13-17 is attached.

In claim 13, line 2, "claim 2" has been changed to -claim 22-.

In claim 14, line 2, "claim 3" has been changed to -claim 22-.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne Marie M Boehler whose telephone number is 703-308-0422. The examiner can normally be reached on 7:30-5:00, Monday-Thursday, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on 703-308-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

amb 10/28/04
Anne Marie M. Boehler
Primary Examiner
Art Unit 3611

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1 Claim 13 (original): A motor vehicle all wheel drive system according to claim 2 wherein:

the device for generating energy is an electric generator driven by the motor vehicle engine connected to a convertor for modifying the generator output to a form suitable for the vehicle drive motors;

each motor comprises a reversible direct current series motor;

the energy storage device comprises either a battery pack or a capacitor bank;

loss of traction is sensed at each wheel by a DC tachometer circuit; and

each circuit includes a switch operative to divert the output of the respective motor in an overrunning condition to the energy storage device with the switch being actuated by the potential difference across the motor.

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1 Claim 14 (original): A motor vehicle all wheel drive system according to claim 3 wherein:

each motor comprises an electric motor; and

the system includes a directional circuit assembly for each motor including a switch controlled by a vehicle shifting mechanism and operative to switch the motor between forward and reverse modes.

Claim 15 (original): A motor vehicle all wheel drive system according to claim 13 wherein each circuit further includes a switch operative to release energy from the energy storage device to the respective motor only when the motor is in a forward mode and is no longer overrunning.

Claim 16 (original): A motor vehicle all wheel drive system according to claim 13 wherein:

motor speed is varied by a silicon controlled rectifier circuit operated by input from the vehicle accelerator; and

the speed of each motor is further modified by input from the vehicle steering system superimposed on the accelerator input to vary the motor speed in proportion to the turning radius of the wheel powered by that motor when making a turn.

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Claim 17 (original): A motor vehicle all wheel drive system according to claim 13 wherein each circuit includes a further switch actuated by a brake of the vehicle and operative to direct the output of the respective motor to the energy storage device.

Claim 18 (original): A motor vehicle all wheel drive system including a device for generating energy, a motor receiving energy from the generating device and driving a wheel of the motor vehicle, an energy storage device for receiving energy discharge from the motor, and a directional device for directing energy flow in the system, characterized in that:

the system includes means for sensing wheel load; and

the directional device is operative in response to sensed wheel load to direct energy from the energy generating device to the motor and is operative in